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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,021	12/10/2003	Takashige Terakawa	EM002-US	5187
21254	7590	02/02/2005	EXAMINER	
MCGINN & GIBB, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817			HAM, SEUNGSOOK	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 02/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.



Office Action Summary

Application No.

10/731,021

Applicant(s)

TERAKAWA ET AL.

Examiner

Seungsook Ham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/4/04, 12/10/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 2, 3, 5-15 and 17-20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 8-17 of U.S.

Patent No. 6,801,103 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims are the same except in semantics. It should be noted that "wherein the inductor has a magnetic saturation characteristic, by which the inductor acts as a circuit element magnetically saturated by the short-circuit current and discharge the short-circuit current from the electronic apparatus to the ground line," in claim 2, lines 6-9 is inherent from the patent claim 8, "an inductor that suppresses noise induced on the ground line that flows to the equipment."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2, 3, 8, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Huang (US '857), Hjelm et al. (US '292) or Kamoi (JP '085).

Huang (fig. 2) discloses an electronic apparatus having a noise filter, the noise filter comprising: a ground line (the signal line that connects resistor 304 and inductor 305) for discharging a short-circuit current generated on an electronic apparatus (AC power signal 205 is connected to a receiver) to ground 207; an inductor 35 which suppresses a noise current, induced on the ground line, flowing from the ground line into the electronic apparatus(col. 3, lines 25-56); a resistor 304 connected in parallel with the inductor, and the resistor suppresses a resonant frequency current caused by series resonance of, earth capacitance 206 between the electronic apparatus and ground, and the inductor, and dissipates electric power charged in the inductor (col. 5, lines 14-28). The limitation, "wherein the inductor has a magnetic saturation characteristic...and discharges the short-circuit current from the electronic apparatus to the ground line," is inherent from the device of Huang since the device structure and the function of the inductor of Huang are the same the applicant's claimed invention.

Hjelm et al. (fig. 3) also discloses an electronic apparatus having a noise filter, the noise filter comprising: a resistor 32' and an inductor 30' connected in parallel,

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coupled to an electronic apparatus 44; the resistor suppresses a resonant frequency current and the inductor suppresses a noise current (col. 3, lines 9-59). The limitation, "wherein the inductor has a magnetic saturation characteristic...and discharges the short-circuit current from the electronic apparatus to the ground line," is inherent from the device of Hjelm et al. since the device structure and the function of the inductor of Huang are the same the applicant's claimed invention.

Kamoi (fig. 1) also discloses an electronic apparatus having a noise filter, the noise filter comprising: a resistor R and an inductor L connected in parallel, coupled to an electronic apparatus 2; the resistor suppresses a resonant frequency current and the inductor suppresses a noise current (see abstract and paragraph [0013]). The limitation, "wherein the inductor has a magnetic saturation characteristic...and discharges the short-circuit current from the electronic apparatus to the ground line," is inherent from the device of Hjelm et al. since the device structure and the function of the inductor of Huang are the same the applicant's claimed invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (US '857), Hjelm et al. (US '292) or Kamoi (JP '085).

The specific values for currents and impedance are considered as obvious modification to obtain a desire filter characteristics especially considering the applicant failed to show criticality of such values.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (US '857), Hjelm et al. (US '292) or Kamoi (JP '085) as applied to claim 2 above, and further in view of Morrill (US '379).

Huang, Hjelm et al. and Kamoi do not show the specific structure of the noise filter and using a variable resistor. However, using a toroidal coil as an inductor and a variable resistor in a noise filter are well known in the art. Morrill (figs. 4 and 7-8A) discloses a similar noise filter structure having a variable resistor coupled in parallel with a toroidal inductor.

It would have been obvious to one of ordinary skill in the art to use the noise filter of Morrill in the electronic apparatus of Huang, Hjelm et al. or Kamoi for a compact design as shown by Morrill (col. 3, lines 1-47).

Claim Rejections - 35 USC § 102/103

Claims 1, 4-7, 13 and 16-20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Huang (US '857), Hjelm et al. (US '292) or Kamoi (JP '085).

Huang (fig. 2), Hjelm et al. (fig. 3) and Kamoi (fig. 1) show the same noise filter as the applicant's claimed invention. The limitation, "assuming a lower limit angular frequency of the noise current...a relationship of $\sqrt{L/C} < R < 2\omega n^2 L$ (provided $C > 1/(4$

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wn⁴L)) is established," as recited in claims 1 and 4, and the subject matter of claims 5-7 are inherent from the device of Huang, Hjelm et al. and Kamoi since the structure of the noise filter and the function of the resistor and the inductor are the same as the applicant's claimed invention especially considering each limitation uses a phrase, "assuming".

Alternately, it would have been obvious to one of ordinary skill in the art to design the noise filter to meet the limitations recited in claims 1 and 4-7 since Huang (col. 5, lines 19-27), Hjelm et al. (col. 3, lines 9-18, and 53-55) and Kamoi (paragraph [0010]) teach the resistor has a greater value than the impedance of the inductor and the capacitor (earth capacitance).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yoshida (JP '822), Gopfrich et al. (US '425), Chastain et al. (US '042), and Link (US '591) disclose a noise filter having a resistor connected in parallel with an inductor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seungsook Ham whose telephone number is (571) 272-2405. The examiner can normally be reached on Monday-Thursday, 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571)-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Seungsook Ham
Primary Examiner
Art Unit 2817

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